A COMPARISON OF GENERAL AND SPECIFIC INSTRUCTIONS TO PROMOTE TASK ENGAGEMENT AND COMPLETION BY A YOUNG MAN WITH ASPERGER SYNDROME

KELLY J. BOUXSEIN, JEFFREY H. TIGER, AND WAYNE W. FISHER

MUNROE-MEYER INSTITUTE

UNIVERSITY OF NEBRASKA MEDICAL CENTER

Previous research has suggested that the topography of instructions (general vs. specific) may influence the likelihood that young children comply with instructions. The purpose of the current study was to compare the rates of task completion of a young man diagnosed with Asperger syndrome when provided with general and specific instructions pertaining to the task. The results showed that specific instructions occasioned higher levels of task completion, even when no differential reinforcement contingencies were in place.

DESCRIPTORS: Asperger syndrome, general versus specific instructions, goal setting, on-task behavior

Completing assigned vocational tasks is a common challenge for individuals with developmental disabilities (Graff, Gibson, & Galiatsatos, 2006). In a recent survey, employers of individuals with developmental disabilities reported that their greatest concerns were insufficient support from job coaches, reduced productivity, and maintaining quality control (Morgan & Alexander, 2005). Designing interventions to increase the independent completion of vocational tasks may therefore eliminate a major hurdle for individuals with developmental disabilities. Even though a number of antecedent- and consequence-based interventions have been successful for promoting task completion among individuals with disabilities (e.g., behavioral momentum, Mace et al., 1988; differential reinforcement of task completion, Lalli et al., 1999; task chaining, Lalli, Casey, & Kates, 1995), task completion also may be influenced by the specificity with which instructions are delivered.

Harding, Wacker, Cooper, Millard, and Jensen-Kovalan (1994) evaluated the effects of instruction specificity on the compliance of 7 children (4 to 6 years old) who had been referred to an outpatient clinic for the treatment of noncompliance and destructive behaviors. Compliance with instructions was more likely to follow a specific instruction (e.g., ''Billy, put 2 blocks in the basket'') than a general instruction (e.g., ''You need to do this'') for 3 of these children. Although promising, the Harding et al. evaluation was conducted with a relatively homogenous group of young participants who completed short-duration tasks. The generality of these results has not been assessed with older individuals with developmental disabilities for whom more sustained engagement is the ultimate goal. Therefore, the purpose of the current study was to compare the levels of task completion of a young man with a developmental disability when provided with both general and specific instructions.

METHOD

Participant and Setting

Joshua, a 19-year-old boy who had been diagnosed with Asperger syndrome, was referred to a day-treatment center for the assessment and

This investigation was supported in part by Grant 7 R01 MH069739-03 from the National Institute of Mental Health.

Requests for reprints should be addressed to Jeffrey H. Tiger, who is now at the Psychology Department, 218 Audubon Hall, Louisiana State University, Baton Rouge, Louisiana 70803 (e-mail: jtiger@lsu.edu).

doi: 10.1901/jaba.2008.41-113

treatment of self-injury (which was treated separate from the current evaluation). Joshua's parents reported that he had difficulty completing schoolwork and household chores without repeated prompting. Joshua's parents were particularly concerned that this problem would lessen his chances of holding a job. Sessions were conducted in small therapy rooms that contained a table, chairs, and a one-way observation mirror.

Procedure

Sessions involved observing Joshua while he engaged with three tasks similar to those encountered in his educational and potential vocational programming. These tasks were reading short passages and answering four short-answer questions (hereafter referred to as reading sessions), cutting out shapes (circles, stars, and triangles) from standard copier paper with a pair of scissors (hereafter referred to as cutting sessions), and typing lines of text from a short passage onto a laptop computer opened with Microsoft Word (hereafter referred to as typing sessions). Joshua was provided with materials to engage in these tasks during 15-min sessions (the quantity of materials was sufficient to exceed the stated goals during specific-instruction conditions).

During the general-instruction condition, the therapist entered the room and provided the task materials for the session. After providing the materials, the therapist provided a general instruction (e.g., ''Here are some shapes, cut out as many as you can'') and then left the room. The therapist reentered the room and provided a general statement of praise after 15 min (e.g., ''Looks like you are working hard'') regardless of the amount of the task completed.

Sessions during the specific-instruction condition were identical to those in the general-instruction condition, except that the presession instructions included a specific goal and a time frame (e.g., ''Here are some shapes, try to cut out at least five shapes in the next 15 minutes''). The therapist provided a general statement of praise after 15 min (i.e., no specific consequences were provided for achieving the preset goal). The initial goal for each task was set based on the level of task completion during the general-instruction baseline. After Joshua met or exceeded the stated goal for two consecutive sessions, goals subsequently were increased by one, two, and three items for reading, cutting, and typing, respectively. Functional control was demonstrated using a combination changing-criterion design and multiple baseline across tasks design.

Response Measurement and Interobserver Agreement

The therapist collected all materials at the end of each 15-min session to assess Joshua's performance of the three tasks. The therapist then counted the number of items Joshua completed (i.e., the number of questions answered correctly in the reading sessions; the number of shapes cut out in the cutting sessions; and the number of lines of text typed in the typing sessions, rounded to the nearest half line). On-task behavior was defined separately for each task. On task during reading sessions was defined as Joshua's eyes orienting towards the reading materials or writing for greater than 3 consecutive seconds. On task during cutting sessions was defined as Joshua closing the scissors on a piece of paper. On task during typing sessions was defined as Joshua depressing a key on the laptop keyboard. On-task behavior was recorded from behind a one-way mirror using a 10-s partial-interval recording system.

A second observer simultaneously but independently scored data during 30% of reading sessions, 24% of cutting sessions, and 28% of typing sessions. Agreement for on-task behavior was calculated by dividing the total number of intervals in which both observers' records agreed on either the occurrence or nonoccurrence of on-task behavior by the total number of intervals in the session. This quotient then was multiplied by 100%. The mean agreement

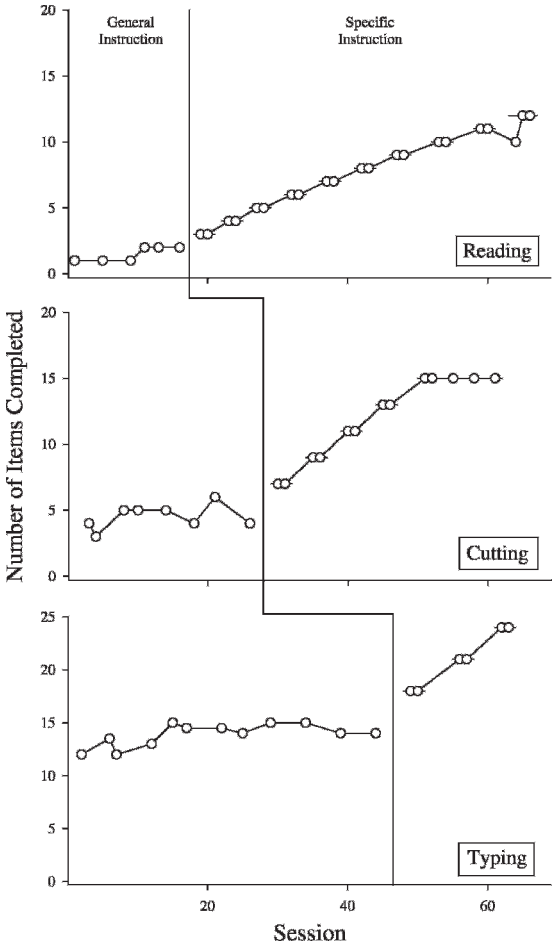

Figure 1. The number of items completed across reading, cutting, and typing tasks. The horizontal lines indicate the stated goal (i.e., performance criterion) during that session.

scores for on-task behavior were 92% (range, 87% to 98%) for reading, 94% (range, 89% to 97%) for cutting, and 96% (range, 93% to 99%) for typing. Observers' scores for the number of items completed were always in agreement.

RESULTS AND DISCUSSION

Figure 1 shows the number of reading, cutting, and typing tasks completed per session. When provided with a general instruction, Joshua completed few items during each task (*M*s = 1.5 questions, 4.5 shapes, 13.9 lines typed) and was scored on task infrequently (*M*s = 45%, 56%, 74% for reading, cutting, and typing, respectively; data not shown). However, when provided with a specific instruction Joshua completed the number of tasks specified in the presession instruction in every treatment session except Session 64 (reading session). Over the course of the evaluation, item completion increased to 12 questions, 15 shapes, and 24 lines typed. On-task behavior also increased to means of 66%, 89%, and 90% for reading, cutting, and typing, respectively (data not shown).

These results are similar to those of Harding et al. (1994), who found that children who had been referred to an outpatient clinic were more likely to comply with instructions that specified a target response (e.g., "Billy, answer your math questions") than more general instructions (e.g., "You need to do this"). The current results extend the findings of Harding et al. by evaluating instruction type with a novel population (i.e., an older individual with a developmental disability) and with more protracted tasks. Data from these two studies suggest that instructions should be descriptive of target performance to maximize compliance and task completion. These data and their implications should be regarded as preliminary until a broader analysis of instructional topographies is completed in future research.

For instance, terminal goals may have been met more rapidly had those goals been stated at the onset of the specific-instruction condition (i.e., the gradual increases in performance goals may not have been necessary to achieve the high levels of item completion observed in the current study). Due to the generally high levels of on-task behavior observed during the general-instruction condition, we chose to incrementally increase performance goals to avoid a ceiling effect (i.e., not setting a goal beyond the capacity of the individual). Nonetheless, future researchers should consider

conducting terminal-performance probes prior to initiating a fading schedule for item completion.

Also, it is interesting that task completion and on-task behavior increased given the change in instructional topographies, even though there were no differential reinforcement contingencies programmed for achieving those goals (i.e., a general statement of praise was made independent of achieving a goal). These data suggest that the specific instruction served as a more effective discriminative stimulus for task completion than did the general instruction. The behavioral history that resulted in this differential effectiveness was not identified in the current study. It is possible that meeting a specific goal historically had resulted in differential access to positive reinforcers (e.g., praise or preferred items) or negative reinforcers (e.g., removal of the task or avoidance of additional prompting) relative to compliance with a more general instruction.

Identifying the precise behavioral histories that result in sustained behavior change in the absence of reinforcement contingencies has clear implications for clinical practice and research. Given basic research suggesting that instructed behavior is less sensitive to contingency changes than noninstructed or shaped behavior (Shimoff, Catania, & Matthews, 1981), it may be the case that providing instructions or stating goals may generate robust responses to behavioral interventions that are less likely to dissipate following imperfect implementation (e.g., Northup, Fisher, Kahng, Harrell, & Kurtz, 1997; Vollmer, Roane, Ringdahl, & Marcus, 1999). Perhaps by including instructions during the initial intervention, treatment gains may be prolonged in natural environments when threats to procedural integrity occur.

REFERENCES

Graff, R. B., Gibson, L., & Galiatsatos, G. T. (2006). The impact of high- and low-preference stimuli on vocational and academic performances of youths with severe disabilities. *Journal of Applied Behavior Analysis*, *39*, 131–135.

Harding, J., Wacker, D. P., Cooper, L. J., Millard, T., & Jensen-Kovalan, P. (1994). Brief hierarchical assessment of potential treatment components with children in an outpatient clinic. *Journal of Applied Behavior Analysis*, *27*, 291–300.

Lalli, J. S., Casey, S., & Kates, K. (1995). Reducing escape behavior and increasing task completion with functional communication training, extinction, and response chaining. *Journal of Applied Behavior Analysis*, *28*, 261–268.

Lalli, J. S., Vollmer, T. R., Progar, P. R., Wright, C., Borrero, J., Daniel, D., et al. (1999). Competition between positive and negative reinforcement in the treatment of escape behavior. *Journal of Applied Behavior Analysis*, *32*, 285–296.

Mace, F. C., Hock, M. L., Lalli, J. S., West, B. J., Belfiore, P., Pinter, E., et al. (1988). Behavioral momentum in the treatment of noncompliance. *Journal of Applied Behavior Analysis*, *21*, 123–141.

Morgan, R. L., & Alexander, M. (2005). The employer's perception: Employment of individuals with developmental disabilities. *Journal of Vocational Rehabilitation*, *23*, 39–49.

Northup, J., Fisher, W. W., Kahng, S., Harrell, R., & Kurtz, P. F. (1997). An assessment of the necessary strength of behavioral treatments for severe behavior problems. *Journal of Developmental and Physical Disabilities*, *9*, 1–15.

Shimoff, E., Catania, A. C., & Matthews, B. A. (1981). Uninstructed human responding: Sensitivity of low-rate performance to schedule contingencies. *Journal of the Experimental Analysis of Behavior*, *36*, 207–220.

Vollmer, T. R., Roane, H. S., Ringdahl, J. E., & Marcus, B. A. (1999). Evaluating treatment challenges with differential reinforcement of alternative behavior. *Journal of Applied Behavior Analysis*, *32*, 9–23.

Received September 14, 2006
Final acceptance February 23, 2007
Action Editor, Mark Dixon